



<i>QUICK</i> SEARCH:	[advanced
Author:	Keyword(s):
Go	

HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS

American Journal of Clinical Nutrition, Vol. 85, No. 6, 1598-1605, June 2007 © 2007 American Society for Nutrition

ORIGINAL RESEARCH COMMUNICATION

Dietary fat and plasma total homocysteine concentrations in 2 adult age groups: the Hordaland Homocysteine Study ^{1,2,3}

Paula Berstad, Svetlana V Konstantinova, Helga Refsum, Eha Nurk, Stein Emil Vollset, Grethe S Tell, Per M Ueland, Christian A Drevon and Giske Ursin

¹ From the Department of Nutrition, Institute of Basic Medical Sciences, University of Oslo, Norway (PB, HR, EN, CAD, and GU); the Department of Public Health and Primary Health Care (SVK, SEV, and GST) and the Section for Pharmacology, Institute of Medicine (HR and PMU), University of Bergen, Norway; the Oxford Centre for Gene Function, Department of Physiology, Anatomy & Genetics, University of Oxford, United Kingdom (HR); and the Department of Preventive Medicine, University of Southern California, Los Angeles, CA (GU)

Background: The intake of n-3 (formerly called omega-3) fatty acids (FAs) may be inversely associated with plasma total homocysteine (tHcy) concentrations, but the epidemiologic data are sparse.

Objective: We examined the association between dietary fat and tHcy in a Norwegian population.

Design: A cross-sectional, population-based study of 5917 subjects in 2 age groups (47—49 and 71—74 y old) was conducted with the use of food-frequency questionnaires and measurement of plasma tHcy concentrations.

This Article

Page:

▶ Full Text

Year:

- Full Text (PDF)
- Supplemental Table
- Purchase Article
- View Shopping Cart
- Alert me when this article is cited
- Alert me if a correction is posted
- ▶ Citation Map

Services

- ▶ Related articles in AJCN
- ▶ Similar articles in this journal
- ▶ Similar articles in PubMed
- Alert me to new issues of the journal
- Download to citation manager
- ▶ © Get Permissions

Citina Articles

- Citing Articles via HighWire
- Liting Articles via Google Scholar

Google Scholar

- Articles by Berstad, P.
- Articles by Ursin, G.
- Search for Related Content

PubMed

- ▶ <u>PubMed Citation</u>
- Articles by Berstad, P.
- Articles by Ursin, G.

Agricola

- Articles by Berstad, P.
- Articles by Ursin, G.

Results: The intake of saturated FAs (SFAs) was positively and significantly (P for trend < 0.001) associated with tHcy concentrations; the difference in plasma tHcy concentrations between the highest and lowest quartiles of SFAs was 8.8%. The intake of marine very-long-chain n— 3 FAs was inversely associated with tHcy concentrations; the difference in plasma tHcy concentrations between the lowest and the highest quartiles was -5.0% (P for trend < 0.001). Intakes of total and monounsaturated fat also were positively associated with plasma tHcy concentrations (P for trend < 0.001 and < 0.005, respectively), whereas the intake of polyunsaturated fat was positively associated with tHcy concentrations only in the younger subjects (P for trend = 0.03). The associations were weakened by additional adjustment for B vitamin intake but remained significant for SFA intake (P < 0.001). When stratified for total B vitamin intake, the inverse association between tHcy concentrations and very-long-chain n— 3 FAs was significant only in the highest quartile of B vitamin intake (P for trend = 0.001), regardless of supplement use.

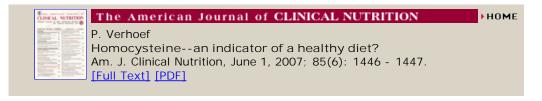
Conclusions: High intakes of SFAs are associated with high plasma concentrations of tHcy. The inverse association between dietary intakes of very-long-chain n-3 FAs and plasma tHcy concentrations is apparent only at high B vitamin intakes.

Key Words: Diet \bullet dietary fat \bullet total homocysteine \bullet n— 3 fatty acids \bullet saturated fat \bullet fish \bullet Hordaland Homocysteine Study

Related articles in AJCN:

AJCN 2007 85: 1446-1447. [Full Text]

This article has been cited by other articles:



HOME HELP FEEDBACK SUBSCRIPTIONS ARCHIVE SEARCH TABLE OF CONTENTS

Copyright © 2007 by The American Society for Nutrition